UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,611	09/29/2003	Rika Tanaka	00862.023251	8530

5514 7590 10/09/2007

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
AUGUSTINE, NICHOLAS	
ART UNIT	**PAPER NUMBER**
2179	
MAIL DATE	**DELIVERY MODE**
10/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/671,611	TANAKA ET AL.	
	Examiner	Art Unit	
	Nicholas Augustine	2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/22/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A. In response to the following communications: Request for Continued Examination filed: 9/19/2007.

B. Claims 1-3 and 5-10 remain pending.

C. Objection to Specification is withdrawn.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3 and 5-10 are rejected under 35 U.S.C. 103(a) as unpatentable over Abbott III et al. (US 2002/0044152), herein referred to as Abbott, in view of Chen et al. (US 2003/0032876 A1), herein referred to as Chen.

As for independent claims 1-3 and 9-10, Abbott teaches a video combining method and corresponding apparatus, method and computer-readable medium for superimposing a virtual image generated by a computer on a real world observed by a user (figure 1-2), said method comprising the steps, means for, process, elements of: inputting a real image obtained by image sensing the real world (par.23, lines 6-8); inputting position and orientation information of a view point of the user (par.30, line 6); generating a virtual image based on the position and orientation information (par.30, lines 1-6); extracting a virtual image elimination area of the virtual image by (a) detecting an area of the real image corresponding to an area where the user designates in the real world and (b) extracting the detected area as the virtual image elimination area (par.41,52,53; wherein the user can use an input means such as eye gaze to focus "designate an area" of the screen to eliminate virtual information (note par.57-59 and 74); and combining the virtual image with the real image except for the virtual image elimination area (figure 6, par.78,79), wherein the virtual image elimination area allows the user to observe the corresponding area of the real image which is located behind the virtual image and which normally cannot be observed by the user due to the virtual image being superimposed on the area (par.36,41,78). Abbott teaches the method of a user providing input to the HMD, which tells the system how to display virtual information, in such cases as providing elimination areas of the screen to better view the

real world display as disclosed on pages 4-5. Abbott teaching of an area of elimination is only part of a virtual object that is designated and eliminated, from which the elimination is from an area designated by a user wherein the area is of a real image (amended limitation) is arguable. Examiner respectfully without traverse that Abbott does not expressly mention "*extracting a virtual image elimination area of the virtual image by (a) detecting an area of the real image corresponding to an area where the user designates in the real world and (b) extracting the detected area as the virtual image elimination area*". However in the same problem sought to be solved Chen teaches extracting a virtual image elimination area of the virtual image by (a) detecting an area of the real image corresponding to an area where the user designates in the real world and (b) extracting the detected area as the virtual image elimination area (par.66; wherein an area is designated by the operator to eliminate virtual objects which are overlaid on a real image, thus elimination areas consist of a bound created/ designated by the operator by means of operators hands which perform a slicing function as known in the art to designate an area to render a virtual object(s) in its entirety or partial (pending on the bounds created by the slicing function) or its entirety while semi-transparent). It would have been obvious to one of ordinary skill in the art to combine Chen into Abbott, this is true because Chen teaches of a system which overlays virtual objects onto real imagery for user input for manipulation of presentation which is the same kind of system of Abbott. Skilled artisans will see Chen's teachings as a small obvious variant into Abbott's system.

As for dependent claim 5, Abbott teaches the video combining method according to claim 3, wherein a marker is located on the designation menus (par.58), and wherein in

said designated area detection step, the marker located on the designation means, is detected from the video image, and the elimination area is detected based on a position of the marker in the video image (par.53).

As for dependent claim 6, Abbott teaches the video combining method according to claim 3, further comprising an information input step for inputting a position and orientation information of the designation means, wherein in said designated area detection step, the elimination area is detected from the video image based on the position and orientation information of the designation means (par.45, 58,59).

As for dependent claim 7, Abbott teaches the video combining method according to claim 3, wherein the designation means has a frame having a particular color (par.62), and wherein in said designated area detection step, the elimination area is detected from the video image based on information on an area surrounded with the particular color in the video image (par.68, detection means to detect color changing behavior in real world to effect virtual objects).

Note: Abbott teaches how to solve the problem: to remove computer graphics from the real world to better suite the end users' experience so that real world objects of interest are not obstructed by computer graphics placed in the real world. Also Abbott teaches in the same field of endeavor: images and video of real world having that of computer graphics placed in the real world to provide additional information/ data to the end user.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as unpatentable over Abbott III et al. (US 2002/0044152). Herein referred to as Abbott.

As for dependent claim 8, Abbott teaches the video combining method according to claim 3, wherein the designation means is at least one hand of the user, and wherein in said designated area detection step, the elimination area is detected from the video image based on information on a closed area formed by at least one hand of the user (par.44, line 1). Abbott does not expressly point out the use of a users hand for control in the given scenarios disclosed by Abbott; however Abbott teaches that his system can incorporate the use of finger or glove device (par. 22) to capture user movement among other input methods such as voice recognition which is expressed in par.53 along with eye tracking and "etc" items. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the use of a data finger or data glove device, in view of Abbott, because Abbott suggest a plurality of input devices with his system and discloses scenarios (such as par.53) about his system that makes use of such included list items (voice, eye tracking) from paragraph 22; being that Abbott includes "etc" to his list of input items in one example (par. 53) one of ordinary skill in the art would find the remaining of the list to be found in paragraph 22 which includes voice, eye tracking (as mentioned in par.53) and in addition a data finger or data glove device to be used for the system in the mentioned examples of par.53 as well as throughout the entire system of Abbott.

Note: ----------

It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in

any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006,1009, 158 USPQ 275, 277 (CCPA 1968)).

Response to Arguments

Applicant's arguments with respect to claims 1-3 and 5-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art cited is related to video combining methods and eliminating graphical overlays in the combining process.

Inquires

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Augustine whose telephone number is 571-270-1056. The examiner can normally be reached on Monday - Friday: 7:30- 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nicholas Augustine
Examiner
AU: 2179

N. Augustine
September 22, 2007

BA HUYNH
PRIMARY EXAMINER